

REMARKS

In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of July 27, 2007 is respectfully requested.

By this Amendment, claims 18, 19, 22, 24, 25, 27-30, 32 and 33 have been amended, claims 26 and 31 have been cancelled and new claims 35-37 have been added. Thus, claims 18-25, 27-30 and 32-37 are currently pending in the application. No new matter has been added by these amendments.

The entire specification has been reviewed and revised. Due to the number of revisions, the amendments to the specification have been incorporated into the attached substitute specification. For the Examiner's benefit, a marked-up copy of the specification indicating the changes made thereto is also enclosed. No new matter has been added by the revisions. Entry of the substitute specification is thus respectfully requested.

On pages 2-3 of the Office Action, the Examiner acknowledged the claim for foreign priority under 35 U.S.C. § 119(a)-(d) to Japanese Application No. 2002-182504, but required that the specification be amended to include a reference to the prior Japanese application in order to obtain the benefit of the prior application under 35 U.S.C. § 119(e), 120, 121 or 365(c). However, it is noted that 35 U.S.C. § 119(e), 120, 121 and 365(c) all pertain to obtaining the benefit of previously-filed U.S. applications. As stated above, the present application claims priority to a previously-filed *foreign* application under 35 U.S.C. § 119(a). The requirements for a claim for priority to a previously-filed foreign application are identified in MPEP § 1893.03(c), and it is noted that a reference to the prior foreign application is not required to appear in the first line of the specification in order for such a claim of priority to be valid. Therefore, it is respectfully submitted that the claim of priority under 35 U.S.C. § 119(a) in the present application satisfies all requirements as identified in MPEP § 1893.03(c).

On page 4 of the Office Action, the Examiner rejected claims 18-20, 22 and 24 under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner asserted that the phrases "and/or" and "elastically expanding/contracting member" are vague and indefinite. In the amended claims, it is noted that the phrase "elastically expanding/contracting member" has been replaced with the phrase "elastic member", and it is also noted that the phrase "and/or" has

been removed. Therefore, it is respectfully submitted that the Examiner's formal rejections under § 112 are not applicable to the amended claims.

On page 5 of the Office Action, the Examiner rejected claims 18-20, 22 and 24 under 35 U.S.C. § 102(b) as being anticipated by JP 02-100791. Further, on page 6 of the Office Action, the Examiner rejected claims 18-20, 22 and 24 under 35 U.S.C. § 102(b) as being anticipated by Graham (US 5,200,679). For the reasons discussed below, it is respectfully submitted that the amended claims are clearly patentable over the prior art of record.

Amended independent claim 18 recites a multi-joint drive mechanism comprising a flat-plate shaped bone-member layer member in which a plurality of bone members are arranged in arrays, with the plurality of bone members being movably coupled at flat-plate shaped coupling portions. Claim 18 also recites elastic members which are arranged so as to stretch over the coupling portions on at least one of a contact-surface side of the bone-member layer member that makes contact with an object and a noncontact-surface side of the bone-member layer member opposed to the contact-surface side. Claim 18 also recites that the elastic members are fixed between the bone members, and that the elastic members are capable of at least one of expansion and contraction. In addition, claim 18 recites that the multi-joint drive mechanism drives flexural motions with the coupling portions between adjoining bone members serving as joints by expanding or contracting the elastic members, and that the multi-joint drive mechanism has a layer structure in which at least the flat-plate shaped bone-member layer member and the elastic members are arranged in a planar fashion.

On page 5 of the Office Action, the Examiner asserts that the JP 02-100791 reference discloses a multi-joint drive mechanism which includes coupling portions 16 and 25, as shown in Figs. 3 and 5. However, the JP 02-100791 reference does not disclose *flat-plate shaped coupling portions*, as required by independent claim 18. Rather, Fig. 1 clearly shows that coupling members 16 are cylindrical, and are therefore not flat-plate shaped coupling portions. In this regard, it is noted that Figs. 3 and 5 (as referred to by the Examiner) show a *cross-section* of the cylindrical coupling members 16. Further, it is noted that reference number 25 appears to identify a hinge which, as shown in Figs. 1-3 and 5, is clearly not a flat-plate shaped coupling portion, as required by independent claim 18. Therefore, it is respectfully submitted that

independent claim 18 is not anticipated by the JP 02-100791 reference.

Graham discloses an artificial hand which, as shown in Fig. 1, includes fingers 12, 13 and 14, each of which includes U-shaped channels 17, 18 and 19 which serve as a proximal phalanx, a medial phalanx and a distal phalanx, respectively. Adjacent channels are connected to each other by pins 22, 23, and the movement of the sections of the fingers is controlled through the operation of cables 47 and 48 which are connected to reels 45 and 46, respectively.

However, Graham does not disclose *elastic members which are arranged so as to stretch over the coupling portions* on at least one of a contact-surface side of the bone-member layer member and a noncontact-surface side of the bone-member layer member opposed to the contact-surface side, with the elastic members being capable of at least one of expansion and contraction, as required by independent claim 18. In this regard, it is noted that the Examiner does not indicate which feature of Graham corresponds to the elastic member of the present invention. However, on page 6 of the Office Action, the Examiner indicates that reference numeral 18 corresponds to the flat-plate shaped coupling portion of the present invention. As indicated above, reference numeral 18 is identified as a U-shaped channel, which therefore does not correspond to a flat-plate shaped coupling portion, as required by independent claim 18.

However, in Figs. 1 and 2, reference numeral 18 appears to point to the sidewall of the U-shaped channel, which corresponds to sidewall 27 in Fig. 3. In this regard, if sidewall 27 is interpreted as the flat-plate shaped coupling portion, Graham does not disclose elastic members which are arranged so as to stretch over the sidewall 27, and therefore does not disclose *elastic members which are arranged so as to stretch over the coupling portions*, as required by independent claim 18.

Further, if the cables 47 and 48 are being interpreted as corresponding to the elastic members of the present invention, it is noted that Graham discloses that the cables 47 and 48 extend over or under pins 22 and 23. However, the pins 22 and 23 are clearly cylindrical, and therefore do not correspond to flat-plate shaped coupling portions. Therefore, Graham does not disclose *elastic members which are arranged so as to stretch over flat-plate shaped coupling portions*, as required by independent claim 18.

Therefore, it is respectfully submitted that independent claim 18 is clearly allowable over

the prior art of record. Further, it is noted that independent claims 27 and 32 include all of the limitations of independent claim 18, and should therefore also be considered to be patentable for at least the same reasons discussed above.

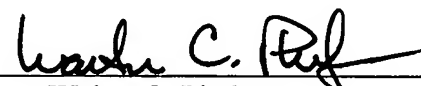
Therefore, it is respectfully submitted that independent claims 18, 27 and 32, as well as claims 19-25, 28-30 and 33-37 which depend therefrom, are clearly allowable over the prior art of record.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice to that effect is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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